ESO 2343

FARM SIZE

Minimum Sustainable Size

by

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BASIC TENETS OF CAPITALISM

1. Great Mgt Performance Today

    - Is OK for Tomorrow

    - Is Not Good Enough for the Day After Tomorrow

2. By Its Very Nature Capitalism

- Is a Method of Change
- Coming from
  - New Consumer Goods
  - New Methods of Production
  - New Markets
  - New Market Systems

- Revolutionizes Economic Structure
  - from within
  - Destroying the Old
  - Creating the New

"Consumer Sovereignty"

Table 2: OHIO: Cash Receipts from Farm Marketings of Crops, Livestock, and Livestock Products, Excluding Government Payments, Ohio, Selected Years, 1925-1988

(Millions of dollars)

Year	Cash Receipts			Percent of Cash Receipts 1/						
	Total	Crops	Livestock & Livestock Products	Crops	Livestock & Livestock Products	Cattle and Calves 2/	Hogs and Pigs	Sheep and Lambs 3/	Dairy Products	Poultry and Eggs
1925	378	131	247	34.6	65.4	7.9	16.9	3.6	19.7	17.3
1930	315	81	234	25.7	74.3	9.2	20.0	2.9	23.7	18.1
1935	296	88	209	29.4	70.6	11.1	17.8	3.9	21.1	15.8
1940	318	92	226	28.9	71.1	13.5	18.2	5.0	20.3	13.5
1945	734	223	512	30.3	69.7	10.9	19.8	2.7	20.9	15.9
1950	894	286	608	32.0	68.0	13.1	21.2	2.1	20.3	11.5
1955	991	392	599	39.6	60.4	11.8	14.8	1.8	20.5	11.1
1960	1,002	400	602	39.9	60.1	14.2	13.8	1.4	20.8	9.3
1965	1,096	426	670	38.9	61.1	16.2	15.2	1.2	19.8	8.0
1970	1,378	600	778	43.5	56.5	15.5	14.2	0.9	18.6	6.7
1975	2,552	1,426	1,125	55.9	44.1	12.1	12.0	0.5	14.6	4.6
1980	4,193	2,821	1,372	67.3	32.7	9.3	6.3	0.3	13.2	3.2
1981	3,344	1,912	1,432	57.0	43.0	10.1	9.1	0.3	17.9	4.6
1982	3,596	2,066	1,530	57.5	42.5	9.7	11.0	0.2	17.2	4.4
1983	3,557	2,034	1,523	57.2	42.8	9.3	9.7	0.2	18.1	4.6
1984	3,626	1,980	1,646	54.6	45.4	9.6	10.2	0.3	17.1	6.6
1985	4,076	2,562	1,514	62.9	37.1	8.4	8.1	0.3	15.2	4.4
1986	3,589	2,003	1,586	55.8	44.2	9.6	10.2	0.3	17.1	6.0
1987	3,422	1,808	1,614	52.8	47.2	10.9	11.6	0.4	17.8	5.5
1988	3,563	1,979	1,584	55.6	44.4	11.0	10.4 4/	0.3	16.1	5.9
1989	3,812	2,114	1,698	55.5	44.5	10.3	10.1	0.2	15.9	7.2
1992	4,110	2,560	1,550	62.3	37.7	7.1	7.8	0.2	15.2	6.3
1993	4,491	2,835	1,656	63.1	36.9	7.8	7.7	0.2	13.3	6.7
1994	4,475	2,898	1,577	64.8	35.2	6.4	6.3	0.3	13.4	7.8

1/ Small errors are imbedded in the early data, before 1955, gleaned from several sources, including revised totals but unrevised components. 2/ Includes dairy cattle. 3/ Includes wool. 4/ Hogs only

Source: After 1940, Ohio Farm Income, Ohio Agricultural Statistics. Before 1940, Income Parity for Agriculture: Part 1 - Farm Income, Sections 3(7-38), 4(11-38), 6(3-39), 12(1-40), 16(7-42), Bureau of Agricultural Economics, U.S. Department of Agriculture.

Ohio's Animal Agriculture: What is it Worth? (A Gross Analysis)

Farm Gate Sales	$4.5 Billion
Livestock/Product Sales (1/3)	$1.5 Billion
Acres of Feed Crops	2 Million
Production ($)/Acre	$300
Value of Feed Crops	$600 Million
Value Added by Livestock	$900 Million
Jobs Created	23,000

Size of Business

"Must Do's"

1. Provide Living for 2 Families

2. Utilize Fully - 1 set of Equip.
   - 1 set of Bldgs.

3. Be in Lowest 1/3 Cost of Production

Driving Forces

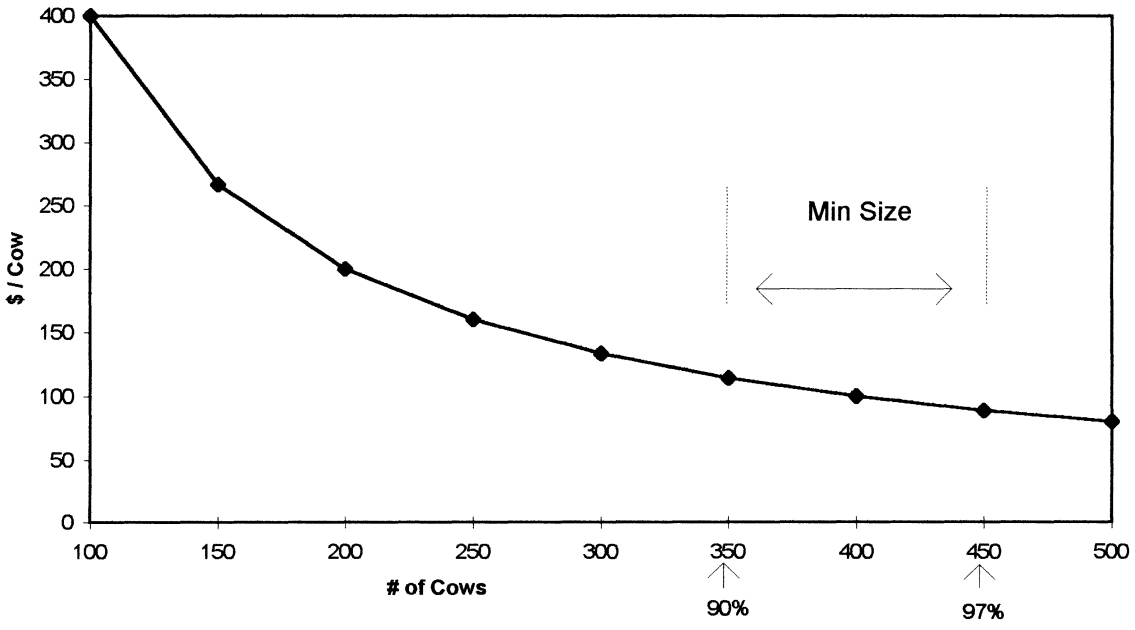
*Minimize Fixed Cost Per Unit

*Large Enough to Provide Living

Minimum Size Dairy

I. Investment Efficiency

- Determining Investment is the Milking Center
- Current Price (2 x 16) $200,000
- Annual Fixed Cost (20%) $ 40,000
- Fixed Cost Per Cow



II. Net Income

Need for 1 family	$75,000
40-50,000 - living	
25-35,000 - investment	
Need for 2 families	$150,000
Average Net Income/Cow	$400
Min. No. Cows	375
($150,000 ÷ 400)	

III. 400 well Managed Cows will

1. Use investment efficiently
2. Provide Income for 2 families
3. Be in Lowest 1/3 Cost of Prod.

IV. BUT REMEMBER

Minimum Size has and

will Need to Increase

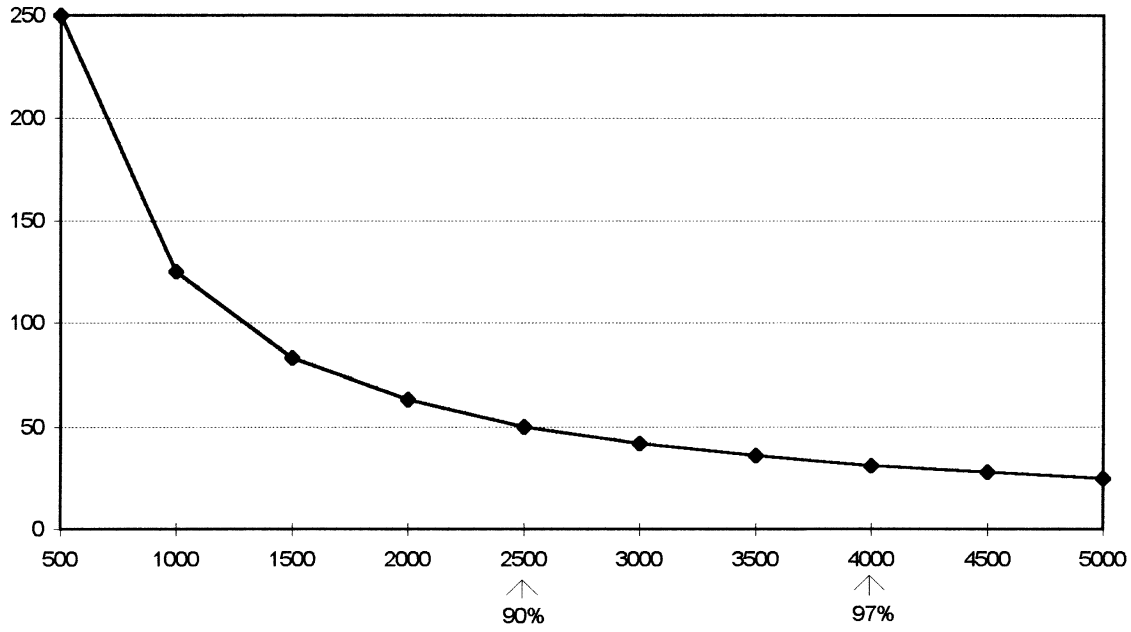
60% Per Decade to

Remain Competitive

Minimum Size Grain Farm

I. Investment Efficiency

- Machinery Investment $500,000
- Annual Fixed Cost (25%) $125,000



II. Income Approach

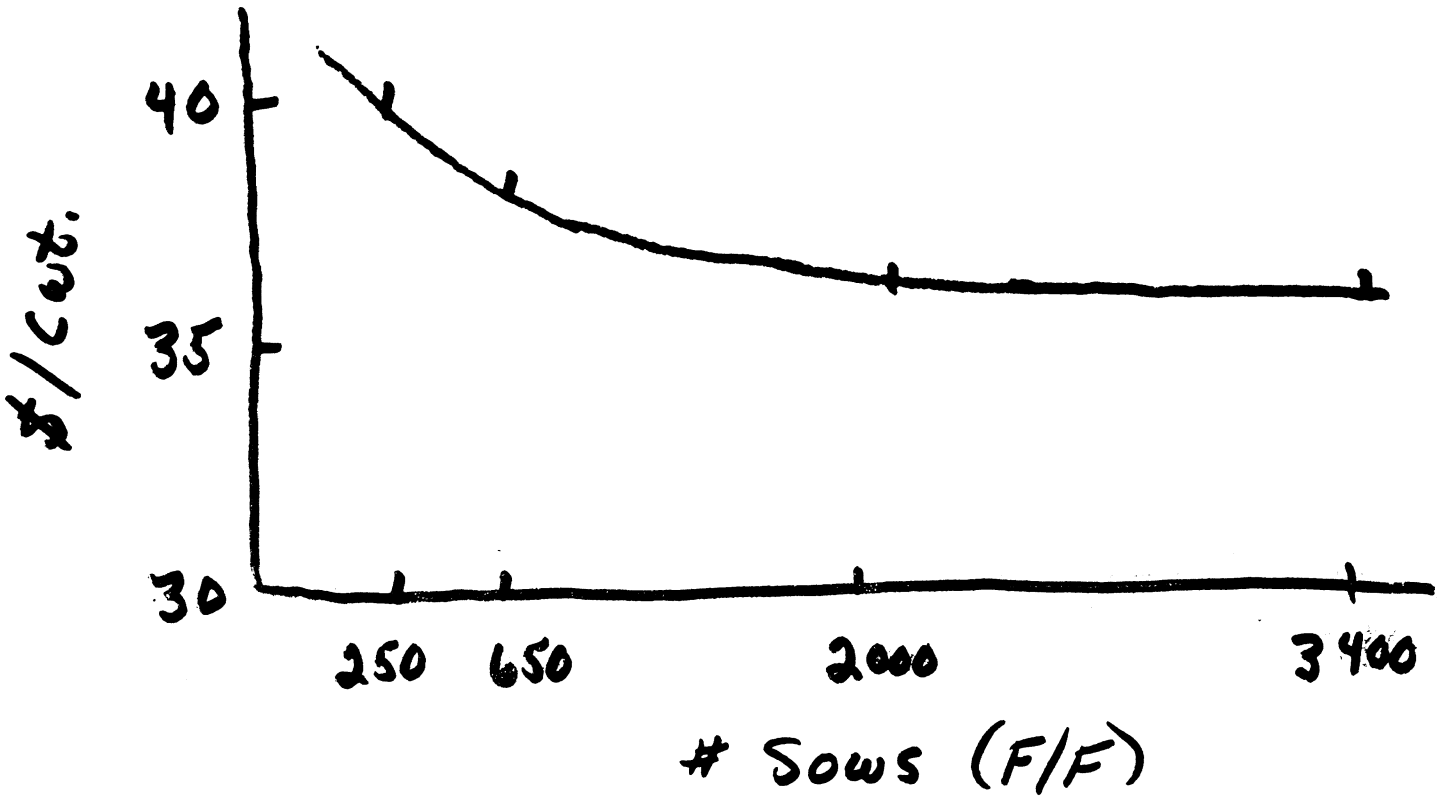
Needed for 2 families	$150,000
Average Net/Acre	$60
Min. # Acres	2500

Minimum Size Swine Farm

I. Income Approach

Needs for 2 families	$150,000
Average Net/Sow	$500
Min. # Sows	300

II. Cost of Production



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Needs for 2 families	$150,000
Average Net/Sow	$500
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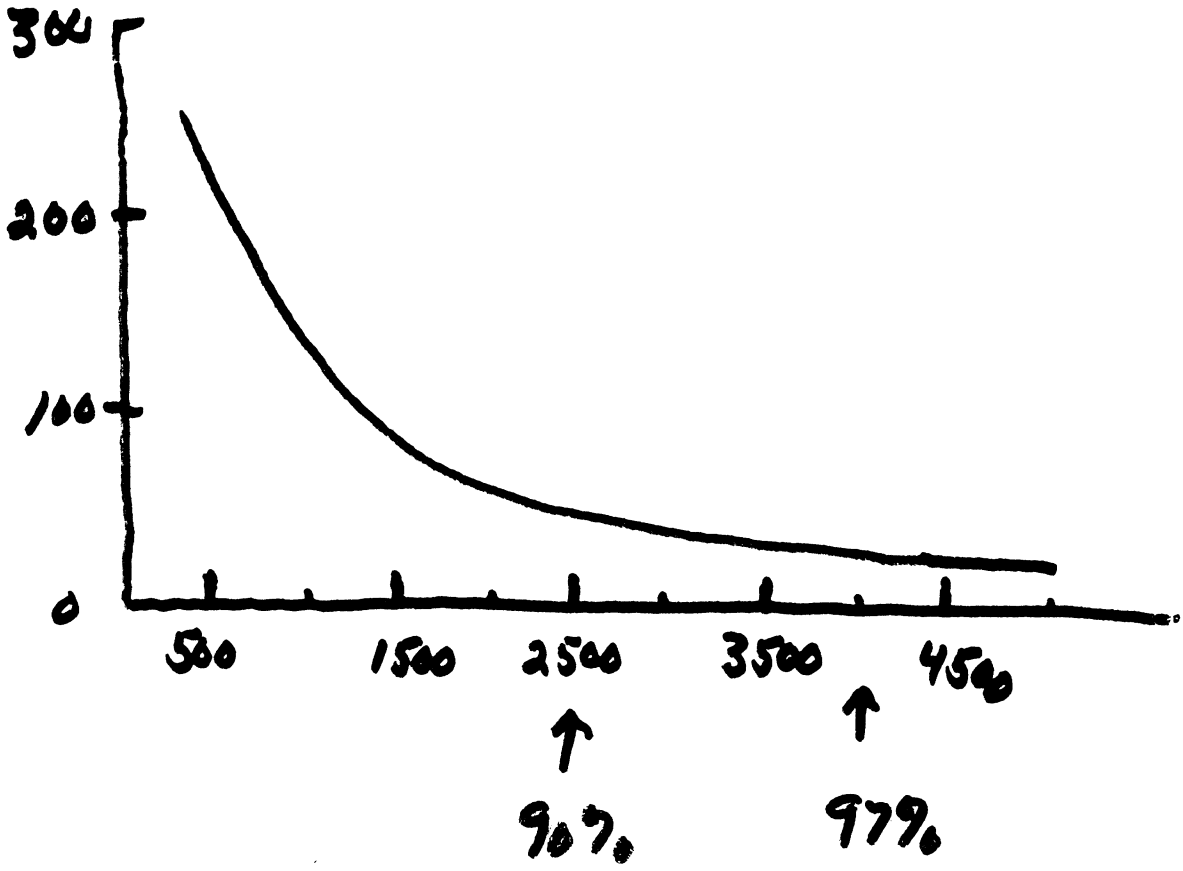

Minimum Size Dairy

I. Investment Efficiency

- Determining Investment is the Milking Center
- Current Price (2 x 16) $200,000
- Annual Fixed Cost (20%) $ 40,000
- Fixed Cost Per Cow

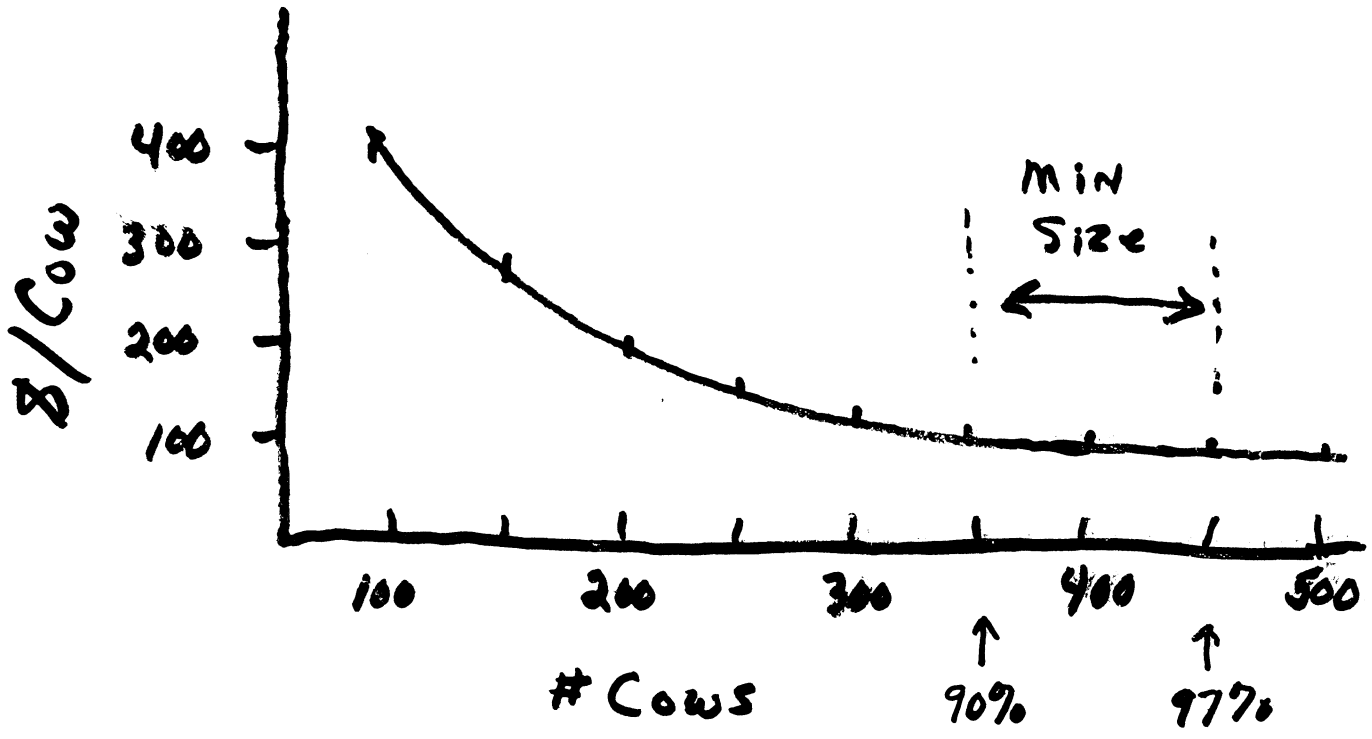

Table 7: **CATTLE AND CALF INVENTORY: Thousands of Cattle and Calves on Farms, with Percentage Distributions and Changes, by Regions and Selected States, United States, 1960, 1975 and 1990**

Region and State	1960 Thousand Head	1960 Percent of U.S.	1975 Thousand Head	1975 Percent of U.S.	1990 Thousand Head	1990 Percent of U.S.	1990 as Percent of 1960	1996 as Percent of U.S.
NORTHEAST	5,285	5.5	4,726	3.6	4,083	4.2	77.3	4.1
Pennsylvania	1,913	2.0	1,960	1.5	1,860	1.9	97.2	1.7
All Other	3,372	3.5	2,766	2.1	2,223	2.3	65.9	2.4
NORTH CENTRAL	43,383	45.1	53,420	40.6	38,325	39.1	88.3	38.3
Ohio	2,250	2.3	2,350	1.8	1,650	1.7	73.3	1.5
Indiana	2,062	2.1	2,125	1.6	1,250	1.3	60.6	1.1
Illinois	3,981	4.1	3,200	2.4	1,950	2.0	49.0	1.7
Michigan	1,701	1.8	1,640	1.3	1,225	1.3	72.0	1.1
Wisconsin	4,253	4.5	4,640	3.5	4,170	4.2	98.0	3.7
Total ENC	14,247	14.8	13,955	10.6	10,245	10.5	71.9	9.1
Minnesota	3,975	4.1	4,430	3.4	2,600	2.7	65.4	2.8
Iowa	6,660	7.0	7,350	5.5	4,500	4.6	67.6	3.8
Missouri	3,980	4.1	6,800	5.2	4,400	4.5	110.6	4.5
N. Dakota	1,758	1.8	2,635	2.0	1,700	1.7	96.7	1.9
S. Dakota	3,262	3.4	4,950	3.8	3,380	3.4	103.6	3.8
Nebraska	5,072	5.3	6,900	5.2	5,800	5.9	114.4	6.1
Kansas	4,429	4.6	6,400	4.9	5,700	5.8	128.7	6.3
Total WNC	29,136	30.3	39,465	30.0	28,080	28.6	96.4	29.2
SOUTH	30,277	31.5	50,329	38.2	36,391	37.1	120.2	38.0
Texas	9,106	9.5	16,600	12.6	13,200	13.4	145.0	14.5
Oklahoma	3,378	3.5	6,500	4.9	5,250	5.4	155.4	5.4
Arkansas	1,374	1.4	2,680	2.0	1,700	1.7	123.7	1.8
Tennessee	1,858	1.9	3,300	2.5	2,420	2.5	130.2	2.6
Kentucky	2,053	2.1	3,750	2.9	2,300	2.3	112.0	2.6
All Other	12,508	13.1	17,499	13.3	11,521	11.8	92.1	11.1
WEST	17,291	17.9	23,092	17.6	19,150	19.6	110.8	19.5
California	4,121	4.3	5,200	4.0	4,800	4.9	116.5	4.4
Colorado	2,267	2.3	3,375	2.6	2,900	3.0	127.9	3.0
New Mexico	1,198	1.2	1,720	1.3	1,360	1.4	113.5	1.5
Idaho	1,415	1.5	2,150	1.6	1,660	1.7	117.3	1.7
Montana	2,245	2.3	3,340	2.5	2,300	2.3	102.4	2.7
All Others	6,045	6.3	7,307	5.6	6,130	6.3	101.4	6.2
48 STATES	96,236	100.0	131,567	100.0	97,949	100.0	101.8	100.0

Source: For 1960 and 1974, Livestock and Meat Statistics, Annual Summaries, USDA for 1960 and 1975. Data for 1990 are from Meat Animals: Production, Disposition, and Income, NASS, USDA, April, 1992.

Table 6: **HOG AND PIG INVENTORY: Thousands of Hogs and Pigs on Farms, with Percentage Distributions and Changes, by Regions and Selected States, United States, January 1, 1960, and December 1, 1974 and 1989**

Region and State	1960 Thousand Head	1960 Percent of U.S.	1974 Thousand Head	1974 Percent of U.S.	1989 Thousand Head	1989 Percent of U.S.	1989 as Percent of 1960	1995 as Percent of U.S.
NORTHEAST	1,075	1.8	918	1.7	1,198	2.2	111.4	2.1
Pennsylvania	558	0.9	633	1.2	975	1.8	174.7	1.7
All Other	517	0.9	285	0.5	223	0.4	43.1	2.4
NORTH CENTRAL	43,957	74.5	42,687	77.6	42,840	79.7	97.5	71.8
Ohio	2,707	4.6	1,950	3.5	2,080	3.9	76.8	3.1
Indiana	4,949	8.4	4,300	7.8	4,350	8.1	87.9	6.9
Illinois	7,469	12.7	6,500	11.9	5,700	10.6	76.3	8.1
Michigan	797	1.3	715	1.3	1,260	2.3	158.1	1.9
Wisconsin	1,963	3.3	1,400	2.5	1,150	2.1	58.6	1.6
Total ENC	17,885	30.3	14,865	27.0	14,540	27.0	81.3	21.6
Minnesota	3,594	6.1	3,700	6.7	4,450	8.3	123.8	8.4
Iowa	12,951	22.0	13,400	24.4	13,500	25.2	104.2	23.9
Missouri	4,232	7.2	3,900	7.1	2,700	5.0	63.8	6.0
N. Dakota	288	0.5	322	0.6	280	0.5	97.2	0.5
S. Dakota	1,328	2.2	1,700	3.1	1,720	3.2	129.5	2.5
Nebraska	2,502	4.2	3,050	5.5	4,200	7.8	167.9	6.8
Kansas	1,177	2.0	1,750	3.2	1,450	2.7	123.2	2.1
Total WNC	26,072	44.2	27,822	50.6	28,300	52.7	108.5	50.2
SOUTH	12,568	21.3	10,266	18.7	8,753	16.3	69.6	22.4
N. Carolina	1,520	2.6	1,890	3.4	2,570	4.8	169.1	13.8
Georgia	1,780	3.0	1,590	2.9	1,200	2.2	67.4	1.6
Kentucky	1,474	2.5	1,100	2.0	975	1.8	66.1	1.3
Tennessee	1,453	2.5	780	1.4	700	1.3	48.2	0.9
Arkansas	478	0.8	270	0.5	710	1.3	148.5	0.0
All Other	5,863	9.9	4,636	8.4	2,598	4.8	44.3	4.8
WEST	1,426	2.4	1,129	2.0	990	1.8	69.4	3.7
48 STATES	59,026	100.0	55,000	100.0	53,781	100.0	91.1	100.0

Source: For January 1, 1960 and December 1, 1974, Livestock and Meat Statistics, Annual Summaries, SRS, ERS, USDA. For December 1, 1989, Meat Animals: Production, Disposition, and Income, NASS, USDA, April, 1992.